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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,162	03/16/2004	Hwal Rim Lee	2080-3238	4151
35884	7590	02/16/2007	EXAMINER	
LEE, HONG, DEGERMAN, KANG & SCHMADEKA			NATNAEL, PAULOS M	
801 S. FIGUEROA STREET			ART UNIT	PAPER NUMBER
12TH FLOOR			2622	
LOS ANGELES, CA 90017				

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/802,162	LEE, HWAL RIM	
	<b>Examiner</b>	<b>Art Unit</b>	
	Paulos M. Natnael	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 04 December 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-14 and 17-19 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,4-14,17 and 18 is/are rejected.  
 7) Claim(s) 3,19 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date: _____	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,2,4,5,7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klopfenstein et al., U.S. Patent No. 6,985,190.

Considering claims 1, Klopfenstein et al. (hereinafter "Klopfenstein") discloses a real-time signal strength display of terrestrial digital television signals. The HDTV coupled to a terrestrial antenna displays the real-time signal strength of terrestrial digital television signals, comprising a tuner 30, microprocessor 32, DBS/set-top receiver 14, TV 12, display 36, as well as a memory device 34. The display 36 includes OSD 54 displaying channels 9, 13, 15, 17, and 54 corresponding to signal strengths 85, 94, 85 and 93. Klopfenstein discloses displaying the signal strength of each channel (fig.7), but does not specifically disclose displaying the combined sum of the signal strengths of the entire channels as a single number. However, displaying the combined sum of the signal strengths of the entire channels would be obvious to the skilled in the art since signal strength values of individual channels are given and thus the combined sum of the signal strength is already available as individual numbers for channel 9,15,15,17,

and 54, even though it is not displayed. Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Klopfenstein by providing a feature that adds the total number from the individual values of the channels that have already been summarized and displayed on the OSD. Doing so would help the user/viewer compare the total values of a group of selected channels.

As to claim 2, see rejection of claim 1;

As to claims 4 and 5, see rejection of claim 1;

Regarding claim 7, see rejection of claim 1.

Considering claim 8, Klopfenstein discloses outputting the channels strength **as a numeral**, meeting the claim alternatively.

Considering claim 9, see rejection of claim 1;

Considering claim 10, Klopfenstein discloses memory 34 and microprocessor 32 that converts the video signal to suitable form to be displayed on the screen 36. (see col. 3, lines 51-61)

3. Claims 6, 11-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Klopfenstein et al., U.S. Patent No. 6,985,190 in view of Iwamura, U.S. Patent No. 5,940,028.

Considering claim **11-13**, Klopfenstein discloses a tuner 30, microprocessor 32, DBS/set-top receiver 14, and TV 12 and display 36. Klopfenstein does not disclose a demultiplexer or a decoder. However, demultiplexing and/or decoding for demultiplexing/decoding the video, audio and other data from the receiving signal is notoriously well known in the art. In that regard, Iwamura discloses a system and method of aligning an antenna and displaying channel numbers as well as signal strength of each channel (fig.7). Iwamura discloses a tuner 2, equalizer 5, error correction 6, CPU 13, Demux 7 that separates and outputs the video and audio signals to video decoder 8 and audio decoder 9. Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify the system of Klopfenstein by providing the demux and decoding in order to properly and efficiently separate as is well known in the art video, audio and other received data.

Considering claims **6 and 14**, Klopfenstein does not disclose a PSI/PSIP decoder for decoding additional data. However, such decoders (PSI/PSIP) are well known in the art of television broadcasting that particularly use the standard MPEG II standard. Therefore, the examiner takes official notice in that the PSI/PSIP decoders are well known in the art of television and would have been obvious to the skilled in the art at the time the invention was made to modify the system of Klopfenstein by providing a PSIP or PSI decoder in order to be able to decode standard MPEG standard data and make the system more useful.

4. Claim 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwamura, U.S. Patent No. 5,940,028 in view of Klopfenstein et al., U.S. Patent No. 6,985,190.

Considering claim 17, Iwamura discloses a tuner 2, demodulation unit (equalizer 5, error correction 6), signal strength searching unit and signal strength storing unit (CPU 13) as well as memory 98 within the Decoder, demultiplexing unit (Demux 7) that separates and outputs the video and audio signals to video decoder 8 and audio decoder 9, and a video display processor, the microcomputer, CPU, 13 which allows the OSD 10 (fig.7) to be displayed on the screen. Iwamura is directed towards a system for aligning an antenna based upon selected channel signal strength value which value is derived from the equalizer tap weight and displayed on the CRT 10 as illustrated on Figs. 6 and 7. Iwamura does not specifically disclose displaying signal strengths of each channel and the sum of signal strength of the entire channels.

Klopfenstein discloses a real-time signal strength display of terrestrial digital television signals and displays individual channel number and their signal strength on the screen. Displaying the combined sum of the signal strengths of the entire channels would also be obvious to the skilled in the art since signal strength values of individual channels have been given and thus the combined sum of the signal strength already available as individual numbers for channel 9,15,15,17, and 54. Therefore, it would have been obvious to the skilled in the art at the time the invention was made to modify

the system of Iwamura providing the signal strength value and/or as shown in fig. 7 a feature that adds the total number of the individual values of the channels on the screen. Doing so would help the user compare the total values of a group of selected channels.

Considering claim 18, Iwamura discloses video and audio decoders. Iwamura does not specifically disclose a PSI/PSIP decoder for decoding additional data. However, such decoders (PSI/PSIP) are well known in the art of television broadcasting that particularly use the standard MPEG II standard. Therefore, the examiner takes official notice in that PSI/PSIP decoders are well known in the art of television signal reception and would have been obvious to the skilled in the art at the time the invention was made to modify the system Iwamura by providing a PSIP or PSI decoder in order to be able to decode MPEG standard data and make the system of Iwamura more useful.

#### ***Response to Arguments***

5. Applicant's arguments filed 12/04/06 have been fully considered but they are not persuasive. The applicant argues that (a) Klopfenstein teaches away from providing a single number that indicates the combined signal strength of a particular antenna. In response (regarding to claim 9), the examiner submits (a) the claim does not recite, contrary to applicant's arguments, providing a single number as a sum nor does it recite "combined signal strength". The claim simply recites "the sum of the signal strength of

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the entire channels" but not "the combined sum of the signal strength of the entire channels" as one "single" number. Since the word sum is defined also as "summary" (see Merriam Webster, Collegiate Dictionary, 10<sup>th</sup> edition), given a reasonably broad interpretation, the sum of the signal strength of the entire channels is disclosed by Klopfenstein as shown on fig.6. The claim does not limit itself to a single number, it merely says a sum (summary) of all channels. Thus, the argument is unpersuasive.

b) Applicant's argument that "Applicant agrees that Klopfenstein can be modified to sum and display the sum of the individual signal strengths, but Klopfenstein did not do so, and Klopfenstein did not provide any motivation to do so" makes no sense. Motivation or suggestion can also be found from the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. In this case, it can be seen that Klopfenstein suggests or gives this motivation to the skilled in the art. That is to say, a single number can be obtained and displayed on the screen by the mere fact that the display already shows individual values or numbers of channel strengths. Klopfenstein displays individual numbers of channel strength, and to display a single number as a sum, it merely involves an addition which is clearly within the scope of Klopfenstein's disclosure as it can be modified (as Applicant also admitted, see page 9, Remarks) to cover any variations, uses or adaptations of Klopfenstein's invention using its general principles, within the known and customary practice in the art. Thus, argument to the contrary is unpersuasive.

***Allowable Subject Matter***

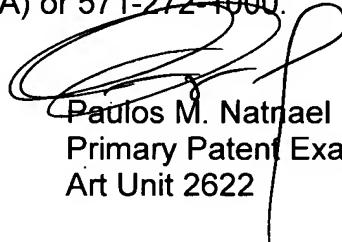
6. Claims 3 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to disclose a method of displaying signal strengths, wherein the number of the channels, signal strength of each channel, and sum of the signal strengths of the entire channels for the searched channels are outputted as a voice, as in claims 3 and 19; and, as a picture, a numeral or a voice as in claim 8.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Paulos M. Natnael  
Primary Patent Examiner  
Art Unit 2622

February 7, 2007